CLAIMS

1. A damper for an automobile seat comprising: a fixing member adapted to be fixed to a chassis on which an automobile seat is rotatably installed; a rotator which is rotatable relative to said fixing member and forms a gap with said fixing member; a silicone-based unvulcanized rubber disposed in the gap; and a one-way clutch means which, in the rotation of the automobile seat in one direction, is adapted to transmit the rotation in the one direction to said rotator, and which, in the rotation of the automobile seat in another direction, is adapted to inhibit the transmission of the rotation in the other direction to said rotator.

2. The damper for an automobile seat according to claim 1, wherein said fixing member is adapted to be fixed to the chassis on which the automobile seat is installed rotatably in raising and lowering directions, and wherein in the lateral rotation of the automobile seat in the lowering direction, said one-way clutch means is adapted to transmit the lateral rotation in the lowering direction to said rotator so as to cause said rotator to rotate, whereas in the lateral rotation of the automobile seat in the raising direction, said one-way clutch means is adapted to inhibit the transmission of the lateral rotation in the raising direction to said rotator.

3. The damper for an automobile seat according to claim 1, wherein said fixing member is adapted to be fixed to the chassis on which the automobile seat is installed rotatably in back-and-forth directions, and wherein in the backward rotation of the automobile seat, said one-way clutch means is adapted to transmit the backward rotation to said rotator so as to cause said rotator to rotate, whereas in the forward rotation of the automobile seat, said one-way clutch means is adapted to inhibit the transmission of the forward rotation to said rotator.

4. The damper for an automobile seat according to any one of claims 1 to 3, wherein said rotator has a central shaft portion and a plurality of hollow cylindrical portions disposed concentrically with the central shaft portion, and said fixing member has a plurality of hollow cylindrical portions disposed concentrically with the central shaft portion and, at the hollow cylindrical portion on an innermost peripheral side among the plurality of hollow cylindrical portions, is fitted slidably over the central shaft portion to rotatably support said rotator, and wherein the plurality of hollow cylindrical portions of said rotator and the plurality of hollow cylindrical portions of said fixing member are overlappingly fitted to each other in a radial direction with the gap in which said silicone-based unvulcanized rubber is disposed.

5. The damper for an automobile seat according to claim 4, wherein said rotator has a closure portion formed integrally with respective one axial end portions of the plurality of hollow cylindrical portions and a recess or a projection provided in or on an axial end face of said closure portion, and said fixing member has a closure portion formed integrally with one axial end portions of the hollow cylindrical portions and a mounting portion formed integrally with said closure portion and adapted to be fixed to the chassis.

6. The damper for an automobile seat according to any one of claims 1 to 3, wherein said fixing member is constituted by two members, one of said members having a central shaft portion and a plurality of hollow cylindrical portions disposed concentrically on the one axial end portion side of the central shaft portion, another one of said members having a plurality of other hollow cylindrical portions disposed concentrically on another axial end portion side of the central shaft portion, wherein the hollow cylindrical portion on an innermost peripheral side among said plurality of other hollow cylindrical portions is fittingly secured in the other axial end portion of the

central shaft portion, wherein said rotator includes two sets of pluralities of hollow cylindrical portions disposed concentrically with the central shaft portion and arranged in an axial direction and a closure portion disposed between said two sets of pluralities of hollow cylindrical portions and formed integrally with respective ones of said two sets of pluralities of hollow cylindrical portions, said rotator being supported rotatably by the central shaft portion between said two members of said fixing member, and wherein both pluralities of hollow cylindrical portions of said fixing member and said two sets of pluralities of hollow cylindrical portions are overlappingly fitted to each other in the radial direction with the gap in which said silicone-based unvulcanized rubber is disposed.

7. The damper for an automobile seat according to claim 6, wherein said one member of said fixing member has a closure portion formed integrally with the one axial end portion of the central shaft portion and respective one axial end portions of the plurality of hollow cylindrical portions, as well as a mounting portion formed integrally with said closure portion so as to be fixed to the chassis, and said other member of said fixing member has another closure portion formed integrally with the respective one axial end portions of the plurality of other hollow cylindrical portions, as well as a recess or a projection provided in or on an axial end face of said closure portion.

8. The damper for an automobile seat according to claim any one of claims 1 to 7, wherein said one-way clutch means has a coil spring whose one end portion is formed as a free end and wound around a cylindrical outer peripheral surface of said rotator and whose other end portion is adapted to be attached to an automobile rear seat.

9. The damper for an automobile seat according to any one of claims 1 to 3, wherein said fixing member includes a housing member and a cover member which is threadedly secured or fittingly secured to said housing member, wherein said housing

member includes an outer hollow cylindrical portion, an inner hollow cylindrical portion disposed concentrically with the outer hollow cylindrical portion on an inner side of the outer hollow cylindrical portion, and a closure portion formed integrally on the outer hollow cylindrical portion and the inner hollow cylindrical portion so as to close one axial end portions of the outer hollow cylindrical portion and the inner hollow cylindrical portion, wherein said cover member is threadedly secured or fittingly secured to another axial end portion of the outer hollow cylindrical portion, wherein said rotator includes an outer peripheral hollow cylindrical portion disposed concentrically with the outer hollow cylindrical portion on an inner side of the outer hollow cylindrical portion and on an outer side of the inner hollow cylindrical portion, an inner peripheral hollow cylindrical portion connected to the outer peripheral hollow cylindrical portion and disposed concentrically with the outer peripheral hollow cylindrical portion on an inner side of the inner hollow cylindrical portion, and wherein the outer peripheral hollow cylindrical portion and at least one of the outer hollow cylindrical portion and the inner hollow cylindrical portion are overlappingly fitted to each other in the radial direction with the gap in which said silicone-based unvulcanized rubber is disposed.

10. The damper for an automobile seat according to claim 9, wherein said rotator further includes an intermediate hollow cylindrical portion disposed intermediate between the outer peripheral hollow cylindrical portion and the inner peripheral hollow cylindrical portion on the inner side of the inner hollow cylindrical portion, and wherein the intermediate hollow cylindrical portion and the inner hollow cylindrical portion are overlappingly fitted to each other in the radial direction with a gap in which said silicone-based unvulcanized rubber is disposed.

11. The damper for an automobile seat according to claim 9 or 10, wherein said

one-way clutch means includes a hollow cylindrical body juxtaposed to the inner peripheral hollow cylindrical portion in the axial direction, as well as a coil spring having one end portion formed as a free end and wound around respective outer peripheral surfaces of the inner peripheral hollow cylindrical portion and the hollow cylindrical body.

12. The damper for an automobile seat according to claim 11, wherein the hollow cylindrical body has on an inner peripheral surface thereof a pair of flat surfaces which oppose each other, so as to engage a shaft member which is inserted into an interior thereof and to be rotated together with the shaft member.

13. The damper for an automobile seat according to claim 11, wherein the hollow cylindrical body has a slit extending from one annular end face thereof to another annular end face thereof in the axial direction and which is capable of undergoing a reduction in diameter, so that the hollow cylindrical body can be rotated together with the shaft member by tightening the shaft member inserted in the interior thereof.

14. The damper for an automobile seat according to any one of claims 11 to 13, wherein said coil spring has an inside diameter of such a measure as to tighten the hollow cylindrical body, and the other end portion thereof is also formed as a free end.

15. The damper for an automobile seat according to claim 11, wherein said coil spring is connected at the other end portion thereof to said rotator, and has such an inside diameter that said coil spring tightens said shaft member inserted in the interior thereof, and that the one end portion which is the free end thereof is rotated together with said shaft member.

16. The damper for an automobile seat according to any one of claims 1 to 15, wherein said silicone-based unvulcanized rubber has a degree of plasticity of 30 to 420.

17. The damper for an automobile seat according to any one of claims 1 to 15,

wherein said silicone-based unvulcanized rubber has a degree of plasticity of 60 to 320.

18. The damper for an automobile seat according to any one of claims 1 to 15, wherein said silicone-based unvulcanized rubber has a degree of plasticity of 160 to 320.

19. The damper for an automobile seat according to any one of claims 1 to 15, wherein said silicone-based unvulcanized rubber has a Mooney viscosity of 10 to 150 ML 1 + 4 (100°C).

20. The damper for an automobile seat according to any one of claims 1 to 15, wherein said silicone-based unvulcanized rubber has a Mooney viscosity of 36 to 72 ML 1 + 4 (100°C).

21. The damper for an automobile seat according to any one of claims 1 to 15, wherein said silicone-based unvulcanized rubber has a Mooney viscosity of 66 to 72 ML 1 + 4 (100°C).

22. The damper for an automobile seat according to any one of claims 1 to 21, wherein said silicone-based unvulcanized rubber is constituted by a silicone-modified ethylene propylene rubber.

23. An automobile seat mechanism comprising: said damper for an automobile seat according to any one of claims 1 to 22; a seat provided rotatably with respect to the automobile chassis; and a backrest provided rotatably with respect to said seat.

24. The automobile seat mechanism according to claim 23, wherein said backrest is provided rotatably in a backward direction with respect to said seat.

25. The automobile seat mechanism according to claim 23 or 24, wherein said backrest is provided rotatably in a forward direction with respect to said seat.

26. The automobile seat mechanism according to any one of claims 23 to 25, wherein said seat is provided rotatably with respect to the automobile chassis through a

shaft member disposed in such a manner as to be passed through said damper, and said shaft member is adapted to be rotated together with the rotation of said seat.